NATURAL SCIENCE
PRIMARY 3
TEACHER'S NOTES
SAMPLE*

Introduction ➤
Unit 1 ➤
Term 1 Review ➤

*Content may be subject to change.
Introduction to ByME Natural Science

Who the course is for

ByME Natural Science is a six-level course for pupils studying the subject of Natural Science in a bilingual context. Level 3 is for pupils in year 3 of Primary.

Aims of the course

The course follows the Natural Science syllabus as laid out by the LOMCE. It is an introduction to the natural sciences, leading learners through their first experiences of Biology, Chemistry and Physics. ByME Natural Science aims to develop pupils’ scientific knowledge and language skills. Given the challenge of teaching Natural Science in a bilingual classroom, it is important that language does not overwhelm the content, nor vice versa. For that reason, this programme was designed to ensure a unique balance between language and content.

The guiding principles are simplicity and motivation – ByME Natural Science is interesting and engaging for the pupil and user-friendly for the teacher. It features:

- A simple, fixed unit structure to ensure easy navigation.
- A fresh and clear design with a dynamic mix of age-appropriate illustrations and attractive photography, providing visual aids that facilitate comprehension.
- A focus on scientific method in order to develop pupils’ investigative and presentation skills.
- A real sense of progression through the levels with a fun, accessible feel to the early levels – with songs, characters and stories – and a more mature and scientific approach in higher levels, a clear bridge to Secondary.
- Flexibility, with many extra, non-content pages, allowing for easy adaptation to specific teaching situations.
- Scientific literacy instruction to support content learning in English through reading, writing, speaking and listening activities.
- A wide range of additional resources.

This course also aims to address the children’s education beyond the scope of Natural Science through:

- Activities designed to prepare children for the question types found in the most common external exams.
- Study skills sections where children are introduced to techniques for improving their own learning.
- Cooperative Learning projects designed to instil collaboration and teamwork as important life skills.
- A strong focus on ethics and values, encouraging children to engage with the world around them, appreciate its complexities and problems, and develop social responsibility.
- Attention to higher order thinking skills to give children opportunities to apply what they know.
- Problem-based activities to encourage critical thinking.
Course components

Pupil’s materials

Pupil’s Book
A 144-page Pupil’s Book including:
▶ a two-page introductory unit introducing pupils to the characters that will accompany them on their learning experience: Alex and Carla in the case of Natural Science 3
▶ nine main units of 12–14 pages
▶ three end-of-term review sections
▶ a picture dictionary.

Activity Book
An optional 64-page Activity Book comprised of six full-colour pages per unit that offers:
▶ a range of engaging exercises to consolidate and extend the topics covered in the Pupil’s Book
▶ additional reading and writing practice of the science content
▶ a mini-project designed to encourage pupils to explore scientific concepts and methods at home or in the classroom
▶ a bilingual glossary to support language learning.

Modules
The modules offer an ideal solution to teaching contexts where only a limited amount of hours in English are available. Each module combines a unit of the Pupil’s Book with the corresponding Activity Book unit.
Teacher’s materials

Teacher’s Book
The full-colour Teacher’s Book includes easy-to-follow, flexible lesson plans and practical support specially designed for English teachers teaching Science. A clear, simple design helps ease-of-reference even in the most challenging teaching situations. The Teacher’s Book fully addresses the LOMCE curriculum through:

> careful attention to content, evaluation criteria and learning standards
> treatment of the updated key competences in correlation with the learning standards
> clearly identified key content and extras sections, enabling teachers to focus on minimum content or extend their lessons according to their timetable
> full answer key to all the questions and activities in the Pupil’s Book and the Activity Book.

Class audio CD
Included with the Level 3 Teacher’s Book, the Class audio CD offers the key recordings for the Pupil’s Book in a traditional, easily accessible format. It can be played on dedicated audio players or on the computer. It includes:

> recordings of the main texts of the content pages
> external exam-style recordings for listening skills practice
> quiz answer audio for self-assessment of end-of-term reviews.

Free access to the complete, unabridged audio is available through the Digital resources, where recordings of all Pupil’s Book reading texts can be found.
Course components

Classroom materials

**Posters, digital flashcards and wordcards**

Large-scale printed posters are available for added visual support in the classroom. There is one poster per unit, with each one providing additional opportunities for vocabulary practice and revision.

In Levels 1 and 2, flashcards are available in printed format, or in digital format from Level 3 upwards.

Wordcards are provided through the digital resources and can be downloaded and printed.

Ideas for using these classroom materials are provided in the Teacher’s Book.

- A full-colour poster per unit to illustrate the most important topics and vocabulary
- Full-colour flashcards (available through the digital resources)
- A large number of wordcards featuring key content vocabulary for each unit (available for print through the Digital resources).

**Printable resources**

Extra printable resources are provided online through the digital resources. These include:

- unit tests
- end-of-term and end-of-year tests
- evaluation grids
- letters to family to help involve parents and carers in their children’s learning.
Digital resources

Extensive digital resources are provided. Their focus is a projectable, fully navigable version of the Pupil’s Book. This includes a spot-zoom facility to increase ease-of-use and facilitate navigation in dynamic classroom moments. It also provides direct access to the entire course audio as well as the Activity Book, Teacher’s Book, interactive digital resources and the printable classroom materials already mentioned.

Interactive digital resources include:

- **Slide presentations:** Two types are provided:
  - Step-by-step experiments and projects from the Pupil’s Book
  - Unit review presentations to be used as an introduction to or revision of key content
- **Activities:** A variety of activities to revise unit vocabulary and concepts: Definitions, Wordsearch, Memory games, Classification, Labelling, Spelling, Read and reveal activities
- **Posters:** Interactive versions of the printed posters
- **Flashcards:** The aforementioned flashcards available in digital format provide a practical image bank.
- **Audio:** Complete, unabridged audio expanding on the Class audio CD. Here all the Pupil’s Book reading texts can be found. An excellent pronunciation aid and useful for dictations
- **Songs:** Especially oriented towards younger learners, however, also available for higher levels for those teachers whose method is especially dynamic or musical
- **Videos:** Links to useful videos chosen to highlight and expand on key topics in a fun and dynamic way.

bilingualbyme.com

The ByME website is home to a wealth of articles, videos, activities and useful links. It also provides support for parents, providing tips and ideas on how to help their children’s learning, as well as including the songs and chants for listening to at home.
Unit introduction

Opening spread
Each unit opens with a vibrant double-page spread. These introductory pages maximise motivation by showing that pupils’ prior knowledge of key topics is often already considerable. Key content and vocabulary is introduced through attractive large-scale illustrations, songs and engaging activities. Don’t forget to look for the magnifying glass hidden somewhere in every opening picture!

Story, external exam practice and project work
Page three and four of every unit follows the course characters on a school field trip.

Page three features a fun but informative story that shows the children enjoying an adventure on their field trip. A dramatization of the story can be listened to on the class CD or on the digital component. The story activities are designed to reflect the most common activities found in external exams.

On the facing page pupils are introduced to the concept of organising and presenting their knowledge in different ways. The content is presented in the form of Alex and Carla’s school trip project.
Unit development

The content pages where pupils build on their prior knowledge through highly visual content and a wide variety of activities presenting different levels of cognitive challenge.

Simple machines

Simple machines help in an amazing way. We can put machines side-by-side and make complex machines. But don’t let simple laws be born; there is more in the machine.

A inclined plane

When we want to lift different levels, a inclined plane is used. We use an inclined plane to lift objects.

A pulley

A pulley uses a rope and a wheel to lift heavy objects.

A screw

A screw is a thick end around a thin end.

The Ancient Egyptians used simple machines to build the Pyramids of Giza. Can you guess which ones?

Moving objects up and down different levels

Cutting objects

Lifting objects

Lifting and lowering heavy objects

Moving objects from one place to another

Holding things together or lifting objects

Did you know?

There are many examples of a pulley in the classroom.

Find an example of a pulley in your classroom.

Identify the simple machines that make up a pair of scissors.

Would a pulley work without a wheel? Explain your ideas. You can draw a diagram to help you.

Did you know?

Snakes swallow their food without chewing it. After eating, they are completely inactive to help them digest.

Reptiles

Reptiles are vertebrate animals. Turtles, tortoises, lizards, snakes, crocodiles and alligators are reptiles. Reptiles spend most of their time on land, but some spend part of their time in water. Reptiles live in all types of habitats, except in extremely cold climates.

Main characteristics

- Walk, slither and swim
- Lizards and snakes
- Turtles and tortoises
- Lots of reptiles walk and run. Some slither.
- Some reptiles can swim.
- Reproduction
- Nutrition
- Physical characteristics
- Respiration

Reptiles

Most reptiles are oviparous. They lay their eggs on land.

Baby reptiles look like adult reptiles when they hatch.

Most reptiles are carnivores. Some are omnivores and eat plants, insects and small animals.

Most have four limbs, but some have no limbs.

They have scales that cover and protect their body.

They breathe with their lungs.

Reproduction

- Eggs are not eaten. They lay eggs where they can.
- Baby reptiles live the same habitat where they hatched.

Nutrition

- Some reptiles eat insects.
- Some reptiles eat plants, fish, and small animals.

Physical characteristics

- They have flexible legs.
- They have scales that open and close.

Respiration

- They have lungs.
- They need oxygen to breathe.

Did you know and In other words boxes provide pupils with fun snippets of information or explain complex terms with a twist.

Course characters are repeated throughout the unit presenting the key concepts visually in order to facilitate comprehension.
**How to use the Pupil’s Book**

**Unit conclusion**

Each unit closes with four pages in which content is extended and revised. *Find Out* and *Think about it* pages are optional, giving the course added flexibility. They can be included or left out depending on each teacher’s timetable and needs.

**Find out**

This page extends the content through an accessible, fun experiment, investigation or project.

**Think about it**

On the facing page pupils are offered a values-oriented link to the same content. Here, pupils are also given the opportunity to develop their presentation skills.

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Find Out: Fun projects and simple experiments provide children with an age appropriate introduction to scientific method (idea, test, conclusions) from the very beginning. Projects are carefully designed to be accessible and appropriate for the youngest children and always use everyday materials. Studio photography including real children of the same age as the pupils helps them relate to the content.

Think about it: Pupils are introduced to values and ethics in relation to the scientific project. They are presented with situations designed to encourage reasoning and an engagement with their immediate surroundings, in order to develop their independence and the beginnings of social and personal responsibility. There are also further ideas for projects and class presentations.
Look back

Unit revision pages ensure that pupils’ progression is regularly checked and reviewed. Each review section is divided into Study Skills and more traditional review activities, designed to check both learning of content and language.

More traditional review questions check progress while also offering ample opportunity for language practice with reading and writing activities.

Study skills: pupils are introduced to a variety of visual organisers. The aim is to help pupils further their own learning process.

Each unit contains a different dynamic revision activity allowing pupils to build up their own set of revision materials and have fun with their classmates at the same time.

A final pairwork activity encourages self-evaluation while also practising speaking and listening and language structures.
Term pages

Four end-of-term pages provide additional progress-checking opportunities as well as the opportunity to practice different communicative skills.

Think together

Cooperative learning project: A final group project takes these communication and collaboration skills further and gives students the opportunity to engage with a key theme from a different point of view while having fun at the same time! These cooperative activities are carefully adapted to the age group. The group dynamics used are fully described in the Cooperative Learning article.

Term review

Science Quiz follows a traditional question and answer format as well as offering the opportunity for practising listening skills.

Team test! allows pupils to compete against their classmates while revising content and practising speaking and listening skills.
Optional Activity Book

The Activity Book is ideal for homework or for increasing the amount of pupils’ reading and writing practice. There are also innovative new sections to encourage family participation and practise the question types found in the most common external exams.

Skills check helps pupils to review content while also offering them extensive practice of the most common activity and question types found in external language exams.
How to use the Teacher’s Book

Preliminary pages

The Teacher’s Book includes a variety of articles with practical ideas on how to get the most out of the lesson.

Helpful tips & Classroom management

The section Helpful tips is set out as a reference resource. Here you will find ideas on setting up reading tasks, maximising the classroom materials, and keeping your pupils motivated through a variety of activity types.

The Classroom management section provides some general ideas about managing your class in order to create a productive environment in which all pupils are able to flourish.

Presenting key content: this section addresses the perennial problem of how to make reading in class dynamic, productive and stimulating.

Classroom organisation: provides clear rules for behaviour which the pupils themselves are asked to help define.

Procedures: ways of sequencing a class session, with suggestions for routines that can be repeated from class to class.

Flashcards and wordcards: flashcards and wordcards are incredibly effective tools if used appropriately. This section offers a wide range of suggestions on how to make these useful resources work for you.

Games and activities: more activities that can be adapted to specific teaching contexts, be it for revision, reinforcement or extension in a mixed-abilities situation, or to occupy fast finishers while the rest of the class finish.

Time management: suggestions for working to a limited timetable. ByME Teacher’s Books give teachers the option of focusing on key content, incorporating clearly marked extras only if time allows.
Cooperative Learning

An article on Cooperative Learning (CL) offers an introduction to this innovative method of teaching. This section complements the end-of-term Teamwork sections, explaining in simple language how to set up each CL structure referenced there.

Introduction to Cooperative Learning: a general theoretical background on CL, defining its main principles and benefits.

Cooperative Learning structures: specific information on the different group dynamics referenced in the lesson plans. Here you’ll find easy-to-follow instructions on how each CL structure is set up.

Further reading: a brief bibliography for those who would like to deepen their knowledge on CL.
How to use the Teacher's Book

Content maps
Each unit and Cooperative Learning section begins with a content map, fully compatible with the LOMCE curriculum, to help the teacher see at a glance the content, evaluation criteria, learning standards and key competences ahead.

Key competences:
related to each learning standard.

LIN: Competence in linguistic communication
MST: Competence in mathematics, science and technology
DIG: Digital competence
LTL: Competence in learning to learn
SOC: Competence in social awareness and citizenship
AUT: Competence in autonomous learning and personal initiative
CUL: Competence in artistic and cultural awareness

Page references: indicate where each learning standard is covered.

Learning standards, evaluation criteria and content: all key elements of the LOMCE curriculum are clearly mapped out for each unit.

Unit information

Unit summary:
an overview of the lesson, highlighting the main topics and outcomes, as well as identifying areas that are popular with or difficult for pupils.

Materials: materials required for each lesson and reminders for pupils of materials they should bring from home for upcoming activities.

Experiment: helps prepare for the science project ahead of time. Especially important where experiments require pupils to bring materials.

Values and attitudes: aims to make the content relevant to pupils, helping them to understand how it affects them directly and why it should matter to them.

Evaluation material: a short description of the evaluation aids available.

digital resources: an index of the materials and activities available through the Digital resources.
Lesson plans
There are step-by-step lesson plans for all units and term sections.

Activity Book solutions & Audio track lists

Activity Book solutions: provided at the end of the unit making the Teacher’s Book a one-stop reference for all the materials of each course.

Audio tracks: the last page of each unit of the Teacher’s Book has a simple to use audio track reference. The audio tracks are also marked clearly on each page image in the lesson plans.
All teachers using *ByME Natural Science* have free access to the ByME Digital resources. Users of the Pupil's Book or Activity Book have access to the complete books. Module users have individual access to the specific units they are using of both the Pupil's Book and Activity Book.

The Digital resources are available both on-line and off-line. Both versions are accessed with a specific code that all users will receive.

The user has access to projectable, fully-navigable versions of the Pupil's Book and the Activity Book.

The digital component also provides easy navigation between the Pupil's Book and the Activity Book and direct access to extensive digital resources.

Through an innovative, easy-to-use spot zoom facility, there is ready access to the complete audio.
The Digital resources include:

- extensive interactive activities (see images below)
- accessible unit review and experiment presentations with integrated audio
- all the songs with the lyrics and a karaoke effect
- access to videos which bring key topics to life
- interactive versions of the course posters
- access to printable resources and a PDF version of the Teacher’s Book

Digital activities to practise key vocabulary vary for each level but include:

- Labelling activities
- Memory games
- Read and reveal activities
- Wordsearches
- Classification and definition activities
The following tips are arranged as an activity bank and will help you to get the most out of the ByME educational materials, add diversity to your classes, and maintain your pupils engaged and motivated.

**Presenting key content**

ByME science 3 presents content in both textual and visual formats. At this level, pupils continue to develop their literacy skills. To encourage active participation and develop confidence at this level, teachers are recommended to use a variety of reading activities to help pupils develop fluency and confidence while reading. There are a variety of activities that can be done before, during and after reading to help pupils get the most out of the text.

### Reading

To encourage active participation and develop fluency and comprehension skills at this level, teachers are recommended to use a variety of read-aloud activities.

- **Read and repeat**: The teacher reads a sentence and the pupils read and repeat the sentence, focusing on proper intonation and pronunciation.
- **Choral reading**: The teacher and all the pupils read the text aloud in unison to encourage word recognition and fluency while building confidence in reading.
- **Order reading**: The teacher instructs pupils of the order in which they will read the text. The first pupil reads one sentence, and then the next pupil reads the following and so forth without interruption.
- **Cloze reading**: The teacher reads the text and pauses at key words to have the pupils read the missing word (or phrase) in unison.
- **Small group reading**: Pupils are divided into small groups to read the text. The groups can be heterogeneous allowing stronger readers to support other group members; or the groups can be homogeneous so that the teacher can work with the group of readers that needs the most support.
- **Partner reading**: Pupils read with a partner. Each pupil takes turns reading and listening.
- **Silent reading**: Pupils are provided with time to read the text silently on their own.
- **Re-reading**: Pupils read texts multiple times to promote better understanding of the main concepts, increase fluency and ensure participation from all pupils.

### Response to reading

Reading strategies can be explored before, during and after reading the text to provide pupils with a purpose for reading and aid comprehension:

- **Making predictions**: The teacher asks pupils to look at the illustrations and photos on the page and scan the text for key words. Then the pupils make predictions about what they will be reading about.
- **Word meanings**: Pupils look through the text to find unfamiliar words. These words can be defined by classmates, the teacher or with the use of a dictionary.
- **Word meanings in context**: The teacher encourages pupils to define new words and important vocabulary by using the text in the sentence around it.
- **Main idea**: Pupils look for the sentence(s) that describes the main idea of each paragraph.
- **Paraphrasing**: Pupils use their own words to retell what they have just read.
- **Summarising**: Pupils use key words to describe the main idea of the text.
- **Organising information**: Pupils sort, categorise or classify the information from the text.
- **Cause and Effect**: Pupils look for examples of cause and effect in the text. The cause explains why something happened. The effect is the description of what happened.
- **Compare and contrast**: Pupils take two main concepts and discuss how they are different and how they are similar.
- **Making connections**: Pupils focus on new vocabulary or a new concept and make a connection to their personal life and experiences or to previous learning.
- **Sequence**: Pupils discuss or write the sequence of a process or event.
- **Drawing conclusions**: Pupils use the information they already know and the information from the text to draw conclusions.
- **Asking questions**: Pupils use the information from the text to ask new questions that require further investigation.

### Writing

Science learning gives writing practice an authentic context. Incorporating the use of science notebooks encourages ownership, builds understanding, and helps
pupils organise the content in a personal way. Various ways of collecting, organising and displaying information are suggested in each lesson.

Journal entries: Pupils ask questions, make observations, summarise, make connections, and collect, record and interpret information.

Visual representations: Charts, tables, graphs, diagrams and drawings. A KWL is a graphic that helps pupils access prior knowledge, establish a purpose for reading and summarise what they have learned (K = what I know, W = what I want to learn, L = what I learned)

Concept maps: Provide pupils with a tool to organise information while brainstorming, classifying, categorising, comparing and summarising new learning.

Flashcards and wordcards
Flashcards and wordcards can be used in endless ways, from presenting or consolidating concepts or vocabulary to providing revision before the end-of-unit tests or at the beginning of a lesson. Here are a number of ideas to help get the most out of these useful resources:

Slow Reveal: Cover the wordcards or flashcards with a sheet of paper (or similar). Take hold of the wordcards or flashcards and slowly reveal it over the top of the paper. Encourage pupils to guess the word.

Quick flash: Place a group of wordcards or flashcards in a pile facing you. Quickly, turn the pile around to face the pupils, then turn it back. The pupils say the word they saw.

Odd one out: Stick three wordcards or flashcards on the board (two that are similar and one that is different). Ask which is the odd one out. Encourage pupils to name the card that is different and to tell you why.

What’s missing: Stick 6 to 8 wordcards or flashcards on the board one by one, naming them as you do so. Then take all the wordcards down and mix them up. Ask a volunteer to come out to the front and choose one (without showing it to anyone). Place the remaining cards on the board again, encouraging the pupils to name them as you do so. Ask the pupils What is missing? Encourage them to name the wordcards the pupil has in their hand.

Tap it: Divide the class into two teams. Stick 4 to 6 wordcards up on the board in reach of the pupils. Call a pupil from each team to stand in front of the cards. Say the definition or give a clue about one of the words. The first pupil to tap the correct card gets a point. Mix the cards up and invite two other pupils to play.

Games and activities
Pupils learn in many different ways. The more experiences pupils can have around a new topic, the more likely they will learn and remember concepts and vocabulary. Games offer a wide range of opportunities for pupils to engage with and use what they are learning. They are also a chance to offer movement, a change of focus, and disguise language learning. The competitive element inspires pupils to participate and, what could easily be an uninspiring list of revision questions or words to define, can be transformed into a fun game.
Helpful tips

I-Spy: Use the classroom, the playground, a poster or the opening illustration for a unit to say I spy with little eye something beginning with (/k/). Pupils suggest words beginning with that letter to guess your word.

Pictionary: Divide the class into two teams. Start to draw an item on the board very slowly. In turns, teams have 30 seconds to guess what you are drawing. You’ll need a timer! Once pupils are familiar with the game, they can play in threes. One pupil begins to draw an item from the unit or the Picture dictionary. The other two pupils in the group must guess what it is. The first to guess, becomes the drawer.

Picture snap: Pupils draw one item from the unit e.g. something they have for breakfast, their favourite animal, a machine in their kitchen. Pupils must keep their picture a secret and must not show others. Provide pupils with the sentence starter you would like them to use e.g. For breakfast I have …; my favourite animal is …; In my kitchen there’s a … Pupils must walk around the classroom repeating their sentence to as many classmates as possible. If they hear somebody say the same item as them, they must shout Snap! and show each other their picture. Check at the end how many pupils had the same item as somebody else.

Stand up if…: Pupils listen to the statements you make. If they think your statement is true, they stand up. If they think it is false, they remain seated. Between statements, pupils sit down. The game can also be played with flashcards. Hold up a flashcard and make a true or false statement about what is on the flashcard. Pupils stand up if it is true.

Repeat if true: Pupils listen to your statements. If they think your statement is true, they repeat it. If they think it is false, they shake their heads and remain silent.

Chinese whispers: Have pupils stand one behind the other, in 3 lines of equal numbers. Whisper a sentence to the pupil at the end of each line at the same time. They must whisper the sentence to the next person in their line, who whispers it to the next until it is passed down all the way to the first person in the line. The pupil at the front of the line puts up their hand when they think they know the sentence or runs and circles a flashcard or wordcard on the board.

Backs to the board: Divide the class in half, into two teams. Place two chairs at the front of the class, each chair facing a team. Ask one pupil from each team to come and sit in the chair, facing their team but with their backs to the board. Write a word or put up a flashcard on the board behind the pupil’s backs and insist that they do not turn round. (Ensure the class understand the word you have written). Encourage the teams to mime the word on the board to their team member who must guess what it is. The team member who guesses first gains a point for their team. Two new team members then come to the chairs.

Noughts and crosses: Draw a noughts and crosses grid on the board and write numbers in each square. Divide the class into two teams and choose one team to be noughts and one team to be crosses. For each number prepare a question or true false statement. Each team takes turns to choose a number. If they answer your question correctly, a team member can come up to the board and replace the number with a nought or a cross. The winning team is the first to get three noughts (or crosses) in a line.

Bingo: Pupils fold an A5 piece of paper in half, in half again, and in half one more time. When they open the paper up, they should have a grid with eight squares. Pupils draw (or write) 8 items from your lesson (food, animals, machines, etc.). Draw a grid with eight squares on the board. Draw items one at a time in your grid. If pupils have that same item in their grid, they can cross it out. When a pupil has crossed all the items out in their grid that are the same as yours, they can shout Bingo! Use the other side of the paper to start a new game.

Listen and do: Pupils listen carefully to two instructions at the same time e.g. Wiggle your hips. Make an angry face; touch something made of wood with your elbow. Scratch your head. When pupils get good at remembering and following two instructions at a time, increase it to three.
Run to the corners: This is best played in the playground or gym. Label the corners of the space you are in with different categories. Organise pupils into groups. Give names to the different groups (animals, professions, food names). Call out the group name and a vocabulary item. The group must run to the correct corner.

Hangman (man on a raft): Instead of a hanging man, draw a man standing on a raft (ten circles under him on a rough river or sea). Draw a crocodile or shark in a corner of the board. Draw spaces for the letters of a word you want pupils to guess. If pupils guess a letter in the word correctly, write it in the correct space. If the letter does not appear in the word, write it under the crocodile or shark, and rub out a circle of the raft. Pupils must guess the word before the raft is totally rubbed away (and the man is eaten by the shark or crocodile!).

Quiz makers: At the end of a unit ask the pupils to work with a partner or divide the class into groups and invite them to make questions for a quiz about the topic. Tell them that they can use the Pupil’s Book to help them. Remind them that they must also supply the answers to their questions. Take in their papers and use the questions to give the class a quiz. Read the questions to the class and ask them to write their answers on a paper. Paraphrase the questions so that the pupils can answer in a few words. They then exchange papers and the quiz is corrected collectively.

Vocabulary storms: As an introductory activity to a new topic, divide the class into groups and ask them to write down as many words as they can that are related to the topic that is going to be studied. At the end of the group activity, invite pupils to share their work with the rest of the class. Encourage the pupils to come to the board and use mind maps to organise the words from their lists.

Scrabble: Have sets of plastic alphabet letters, scrabble letters, and/or letter sets cut up on card. Divide the class into small groups. Give each group a set of letters. The groups spell the word you tell them.

Ready, Steady, Spell: Mini-white boards are a great learning aid! Say a word and have pupils spell it on their mini-white board and hold it up to show you. The boards also provide an easy opportunity for pupils to practise spelling a word before writing it in their books.
**Classroom management**

**Assessment**

Formative and summative assessments are essential in any Science class. In order to develop scientific competences, pupils need to reflect on their work as well as the work of others. In addition to the printable tests available in the Digital resources, there are also evaluation sheets for each unit to help keep track of your pupils’ progress. These are fully compliant with the evaluation criteria and learning standards as set out by the Spanish curriculum.

**Classroom management**

As with all ages, the establishment of clear rules for behaviour is key to successful classroom management. As the pupils are now older and more mature, encourage them to participate in the process of establishing these rules. You may want to explain to pupils that, as in society, they have rights and responsibilities in their Science class.

Elicit ideas from the pupils about the rights they feel they should have and the responsibilities they need to accept so that everyone can share those same rights. Possible rights and responsibilities include:

1. I have the right to share my ideas. I have the responsibility to listen to the ideas of others.

2. I have the right to feel safe sharing my work. I have the responsibility to contribute constructive criticism.

3. I have the right to use a variety of resources in my work. I have the responsibility to take care of those resources and to use them safely.

**Classroom organisation**

The physical arrangement of the classroom varies greatly from school to school and from teacher to teacher. Often, many different specialist teachers share one classroom and need to be sensitive to the needs of their fellow teachers. Depending on the extent of Cooperative Learning it can be important that pupils are seated in groups of four to six in order to share ideas and complete projects in pairs or small groups. If the classroom is set up in rows, pupils can be taught to move their desks quickly and quietly into groups at the beginning of class. It is a routine that needs to be practised but one that can easily be mastered. Some activities can be completed whilst seated in rows.

**Time management**

Many pupils have limited time for their Science class each week. This means that the teacher needs to have all the materials prepared before class and establish procedures and routines in order to use the time effectively. Opening and closing activities can be shortened and lengthened depending on the time allotted for Science class. Holidays, excursions and absent pupils can interfere with the rhythm of the class. If needed, some activities from Analyse and organise, Fragile world or Revise can be sent home as homework.

**Procedures**

Procedures and routines are essential in class. These should be introduced gradually throughout the first term and practised on a regular basis. Positive reinforcement can help the acquisition of these procedures and routines.

Helpful procedures and routines for Science class include:
**Listening routine**

Use a quick and simple chant to get pupils’ attention.

Teacher: 1, 2, 3. Look at me.
Pupil: 1, 2. I’m looking at you.

**Attention routine**

Sometimes during class, the teacher may need to stop the pupils in order to give them further instructions. Many pupils find it difficult to stop working and choose to keep reading, writing, discussing, etc. Using a bell, xylophone or other musical instruments can be useful in getting pupils’ attention, or the teacher can use a quick chant:

I’ve got something important to say.
Put your hands on your (head) and look my way.

Pupils are to leave their work and put their hands on their head. The teacher can change the word head for other parts of the body (e.g. knees, shoulders, etc.).

**Moving desks procedure**

Design a seating arrangement that will require the least amount of moving. Have pupils practise moving their desks quickly, quietly and carefully from rows to groups and back to rows again. Placing coloured tape on the floor can be helpful.

**Distributing materials procedure**

Design a procedure for handing out materials. A helper (or helpers) can be selected every week to help hand them out. This role can be used as a reward for good behaviour.

**Cleaning up procedure**

Design a cleaning up procedure for different types of science projects. Helpers can be useful in this procedure. There are many cleaning up songs on YouTube. You can choose one and play it while pupils clean up.
Cooperative Learning

**What is Cooperative Learning?**

Cooperative Learning (CL) is an educational situation in which students are required to work together in small groups or teams to support each other in order to improve their own learning and that of others. CL goes beyond merely seating students together; simply telling them they are a group does not mean they will cooperate effectively. For students to behave cooperatively, and to reach their full potential within a group or team, they will need some essential elements.

**What are the basic principles of Cooperative Learning?** *(Johnson, Johnson & Holubec, 2008)*

1. **Positive interdependence**

   Students perceive that they need each other in order to complete the group’s task. Every student in a small group must contribute to the learning of the group, and each member needs the others to complete the task. We can enhance positive interdependence by establishing mutual goals which “will help each student to learn and make sure all other team members learn” *(Johnson, Johnson & Holubec, 2008)*.

2. **Individual accountability**

   “Each student’s performance is assessed and the results are given to that student and the rest of the members of the group” *(Johnson, Johnson & Holubec, 2008)*. Therefore each member of the group is responsible for completing their part of the work and must develop a sense of personal responsibility towards him or herself and the rest of the group, because individual performance will affect not only one’s own result, but also the rest of the members’ results.

3. **Promotive interaction**

   “Students promote each other’s learning by helping, sharing, and encouraging efforts to learn” *(Johnson, Johnson & Holubec, 2008)*. CL implies face-to-face interaction. Students need not only to discuss and agree but also to produce a piece of work through combined effort, because Cooperate Learning is not about working individually and make a ‘cut-and-paste’ final product.

4. **Social abilities**

   Students need interpersonal skills in order to be successful. Some of them are:

   - Effective leadership
   - Decision-making
   - Trust-building
   - Communication
   - Conflict resolution
   - Helping and asking for help
   - Organisation
   - Self-esteem and self-confidence

   Our students aren’t born knowing how to behave in a group. We have to teach them, giving them models, and opportunities to practise these skills.

5. **Group processing**

   Developing CL methodology is not easy at first, nor are the effects immediate. Difficulties within the groups, resources and management may arise. That is why formative assessment is needed. This assessment involves both teachers and students.

   One way of structuring group assessment is by:

   - Listing at least three member actions that helped the group be successful (students).
   - Listing at least one action that could make the group even more successful (students).
   - Monitoring the groups and giving feedback on how well the groups are working together and the class as a whole (teacher) *(Johnson, Johnson, & Holubec, 2008)*.

   We need to know the strong and weak points in order to make the right decisions and develop the methodology in the right direction.

**Why Cooperative Learning?**

The benefits of using CL are supported by theory and are well established by classroom research.

There are several reasons why CL works as well as it does:

- Students learn more by doing something active than by simply watching and listening, and CL is by nature an active method.
- Cooperation enhances learning. Weak students working individually tend to give up when they get stuck, but when working as a part of a team they keep going.
When strong students help and work together with weaker students, they often find gaps in their own understanding and fill them in.

Students working alone may tend to delay or skip their assignments, but when they work as a part of a team and realise that others are counting on them, they will often feel more motivated and do the work in a timely manner.

Nevertheless, we should never forget that the benefits of CL are not automatic, and it takes time to work in a cooperative way.

**Cooperative Learning structures (UNT, 2008)**

Once the teacher has determined the objective of the lesson, he or she can select a structure that will provide the optimal learning experience for the student in a cooperative context. Learning structures are available for almost any learning situation.

**Timed pair share**

In pairs, students share with a classmate for a predetermined time while the classmate listens. Then they switch roles. (Kagan & Kagan, 2009)

Steps for the Strategy:
1. Students are paired and work in pairs.
2. Present a problem to the students.
3. Provide them with a specific amount of time to write their answers.
4. Students discuss their answers with either their face or shoulder partners.
5. Call on students to share with the class the answer they have developed with their partners.

**Round robin**

In teams, students take turns responding orally. (Kagan & Kagan, 2009)

Steps for the strategy:
1. Teacher asks a question.
2. Students take turns answering the question.

**Think-Write-Pair Share**

In teams, students write or draw their own ideas before they pair up to discuss them with a partner. This allows students to more fully develop their own ideas before sharing.

Steps for the strategy:
1. Students write their ideas.
2. Students pair up and discuss their ideas with a partner.

**Teammates consult**

In teams students discuss an answer and nobody writes it down until all of them come to an agreement.

Steps for the strategy:
1. Students put their pencils down in the centre of the table.
2. Teammates discuss the question. All members of the team contribute, but all do not have to agree on one answer.
3. When everyone on the team is ready with an answer, team members pick up their pencils and write the answer.

**Team project**

Steps for the strategy:
1. Teacher clearly explains project and amount of time teams have to complete it.
2. Teacher assigns roles: materials manager, reporter, timekeeper, captain…
3. After distributing materials, teams work to complete task.
4. Teacher monitors students.
5. Teams share their project with class. This may be done by creating a chart.

**The teacher’s role in Cooperative Learning**

Teachers should reinforce and help the students to know how to work in a group:

a. Taking care of the different cooperative skills the students will need to manage in order to work together effectively and efficiently. This is essential
Cooperative Learning

because all the elements derived from social interaction in the classroom depend on these cooperative skills.

b. Turning social interaction into promotive interaction. Teachers should make students reflect on the way they address their group mates: what they mean and how they sound.

c. Creating opportunities for inter-individual information intake (or processing) making them aware of their individual accountability.

d. Contemplating group assessment as an instrument for cooperative reflection to ensure the improvement of the cooperative structure. Teachers should help students identify their weak and strong points as a group and take the necessary actions.

Cooperative skills
Cooperative skills can be classified as (Johnson, Johnson, & Holubec, 2008):

Organisation skills: those related to group formation and organisation as well as establishing behavioural rules.
- Encouraging every member to participate
- Turn-taking
- Forming groups quickly with minimum noise
- Staying in the group
- Managing noise level
- Respecting other members’ personal space
- Taking care of materials
- Paying attention to the person talking
- Respecting everybody’s opinions

Working out skills: those devoted to completing the tasks and keeping efficient working relationships within the group.
- Reflecting on more efficient procedures
- Guiding task procedures
- Defining the purpose of the task
- Establishing time limits
- Expressing approval
- Asking for help
- Paraphrasing others’ ideas

- Resolving conflicts
- Making shared decisions by negotiating and reaching a consensus

Formulation skills: those needed for a deep understanding of the concepts the students have acquired.
- Summarising
- Correcting others and adding information
- Scaffolding with previously seen concepts
- Creating memorisation strategies
- Checking understanding
- Explaining how the task should be done

Processing skills: those targeted as raising socio-cognitive awareness to cultivate a more in-depth understanding. For example:
- Discussing ideas
- Integrating different ideas in one conclusion
- Improving the answer of other group member
- Verifying and contrasting the work produced with the instructions given

Team formation
Teachers should form the teams rather than letting the students to choose their own teammates.

One of the fundamental aspects in structuring CL activities is the size of the groups. Ideally, form teams of 3–4 students. Pair work doesn’t usually produce the diversity of ideas and approaches common to CL. In teams of five or more, some students are likely to be inactive.

Make the teams heterogeneous in ability level. In heterogeneous groups, the weaker students learn from others, and the stronger students gain a deeper understanding of the subject by teaching it to their peers.

The Cooperative Learning session
There should be four different stages in every CL Session:

1. Activation
This stage works as a warm-up. It is the moment for eliciting previous knowledge about the topic.
2. Introduction
The teacher introduces new content. This is the moment for giving instructions and explaining the “why”.

3. Development
At this stage teamwork comes into action according to the strategies designed by the teacher.

4. Feedback
The feedback will provide very useful information to the teacher, who checks if the contents have been properly acquired.

And last but not least...
- If you’ve never used CL, consider starting with small group activities in class. Once you’re comfortable with that, try a team project or assignment, up to a level of CL with which you are comfortable.
- At the start of the course, explain to students what they’ll be doing in teams, what procedures you’ll follow, and what your expectations are.
- Make team assignments more challenging than traditional individual assignments. CL works best for challenging problems and activities that require higher-level thinking skills.
- A term assessment is essential to find out how students feel about teamwork. Ask the students to reflect on what works and doesn’t work in their team. If many teams are experiencing the same problem, spend some time in class on the relevant cooperative skills. Most of the time, however, the assessment will show that most teams are working well.
  - Expect initial resistance from students.

Further reading


## UNIT 1  The human body

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>EVALUATION CRITERIA</th>
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<tbody>
<tr>
<td>The human body: external characteristics.</td>
<td>Know the external parts of the human body.</td>
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<tr>
<td>The human body: internal characteristics.</td>
<td>Identify the different body systems and the related organs.</td>
</tr>
<tr>
<td>The senses and the sense organs.</td>
<td>Understand how our senses work and the organs used to carry them out.</td>
</tr>
<tr>
<td>First approaches to scientific activity and the scientific method.</td>
<td>Obtain relevant information about specific phenomena, make predictions, integrate information from direct and indirect observation and communicate the results.</td>
</tr>
<tr>
<td>First approaches to simple experiments and investigations.</td>
<td>Conjecture as to the results of natural occurrences and of simple experiments and investigations.</td>
</tr>
<tr>
<td>Individual and group work.</td>
<td>Work independently and proactively and develop strategies for working in a group.</td>
</tr>
<tr>
<td>Planning a project and presenting a report.</td>
<td>Carry out a project and present a report.</td>
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### LEARNING STANDARDS

<table>
<thead>
<tr>
<th>LEARNING STANDARDS</th>
<th>KEY COMPETENCES</th>
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<tr>
<td>Observes, identifies and describes the external parts of the human body.</td>
<td>MST, LIN</td>
<td>7–9</td>
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<tr>
<td>Identifies and describes the different body systems: circulatory system, respiratory system and digestive system.</td>
<td>MST, LIN</td>
<td>10, 11</td>
</tr>
<tr>
<td>Identifies and describes the organs involved in the circulatory system, respiratory system and digestive system.</td>
<td>MST, LIN</td>
<td>10–15</td>
</tr>
<tr>
<td>Starts to understand the role the body systems play in the life processes of human beings: nutrition, reproduction and interaction.</td>
<td>MST, LIN</td>
<td>10–15</td>
</tr>
<tr>
<td>Explains how the different senses work and which organs they use.</td>
<td>MST, LIN</td>
<td>12–15</td>
</tr>
<tr>
<td>Identifies the role our senses play in the process of interaction.</td>
<td>MST, LIN</td>
<td>12–15</td>
</tr>
<tr>
<td>Identifies some problems related to our senses.</td>
<td>MST, LIN</td>
<td>16, 17</td>
</tr>
<tr>
<td>With help, selects and organises specific and relevant information; analyses it and draws conclusions; reflects on the experience and the process; presents the results.</td>
<td>MST, LTL</td>
<td>9, 16, 17</td>
</tr>
<tr>
<td>Uses books, libraries, etc. and collaborates in the care and maintenance of all the materials available in the school and the classroom.</td>
<td>MST, LTL</td>
<td>9, 6, 16</td>
</tr>
<tr>
<td>Shows autonomy in the planning of activities and tasks and shows initiative in decision making.</td>
<td>LTL, AUT</td>
<td>16, 17</td>
</tr>
<tr>
<td>Uses ICTs to help search for information and/or for presenting the results.</td>
<td>LTL, DIG</td>
<td>16, 17</td>
</tr>
<tr>
<td>With help, carries out simple experiments or investigations, and conjectures as to the results.</td>
<td>MST, LTL, AUT</td>
<td>16</td>
</tr>
<tr>
<td>Uses strategies to help their own learning, as well as asking for help and information.</td>
<td>LTL, AUT</td>
<td>9, 16, 17</td>
</tr>
<tr>
<td>First approaches to cooperative learning.</td>
<td>SOC, LTL</td>
<td>7, 17</td>
</tr>
<tr>
<td>Begins observation, using relevant instruments and consulting written documents and images.</td>
<td>LTL, AUT</td>
<td>9, 16</td>
</tr>
<tr>
<td>Shows autonomy and proactiveness in the planning of and carrying out of actions.</td>
<td>AUT</td>
<td>16, 17</td>
</tr>
<tr>
<td>Presents work clearly and in an organised fashion.</td>
<td>LIN, LTL, AUT</td>
<td>16</td>
</tr>
<tr>
<td>With help, carries out a project and presents a report, using paper and/or digital means, collecting information from different sources and presenting the results orally with the support of images and short texts.</td>
<td>LIN, LTL, AUT, DIG</td>
<td>16</td>
</tr>
</tbody>
</table>
UNIT INFORMATION

UNIT SUMMARY
In this unit pupils will review and extend their knowledge of the human body, looking at different parts of the body and the five senses. They will also be introduced to three vital body systems: the circulatory system, the respiratory system and the digestive system.

At the beginning of the unit pupils will revise parts of the body and the five senses. This subject area is covered in the opening illustration with the help of the course characters, Carla and Alex, who are on a school trip to a doctor’s surgery. The school trip continues in the story and, on their return to school, Alex and Carla carry out a School trip project to review all the parts of the body they have learned. These opening pages are designed to test pupils’ prior knowledge and ease them into the subject matter of the unit, provoking interest and participation.

They will move on to study body systems and look at how our sense organs work. This is a new area of study for the pupils and one that requires a high level of language and knowledge acquisition. Therefore, the aim of this unit should be to introduce pupils to the subject matter, focusing on the idea that our body is made up of systems that work together like a complex machine and less on the detail of how the systems work.

EXPERIMENT

Find out
In the Find out activity on page 16, your pupils will prepare an optical illusion to test how the brain can be tricked into seeing something.

The pupils will need:
• white card
• a pencil
• colouring materials
• tape

Further ideas
Pupils could find more optical illusions on the internet and make posters to display around the school for other classes to enjoy.

You could show pupils how cartoons also trick our brain into seeing moving images by making simple cartoon flip books.

VALUES AND ATTITUDES

In this unit your pupils will learn to appreciate how important our senses are and how people with a sensory impairment can use special objects or tools to carry out everyday activities. Throughout the unit, try to encourage pupils to think about:

• how we use our five senses every day and how we would feel if you lost the use of one of them.
• how important it is to look after our bodies, focusing on looking after our eyes and ears.
• how we should be aware that the people around us may have a sensory impairment and that we should be sensitive to their needs.

Think about it
The Think about it page in this unit focuses on visual impairment. The intention of this section is to focus on how modern day inventions and tools can make it easier for people who cannot see well to adapt to everyday life and continue enjoying their autonomy.
**DIGITAL RESOURCES**

**Presentations**
- **Unit summary**: a simple slide presentation with text, images and audio to review the main ideas of the unit. It can be used at the beginning of the unit to test pupils’ prior knowledge of the unit content or at the end of the unit as a revision tool.
- **Find out**: a slide presentation of the unit’s *Find out* page with text, photos and audio. The slide presentation is perfect for a heads-up class, showing the steps one by one. Use this tool to get the pupils to predict the next steps (with their books closed) or to focus their attention on each step as they carry out the project themselves.

**Activities**
- **Memory game**: useful activity for reviewing key vocabulary and modelling pronunciation.
- **Labelling**: pupils label a diagram of an eye by dragging and dropping the names of its parts.
- **Spelling**: drag and drop letters to spell different parts of the body.
- **Read and reveal**: pupils read sentences about body systems and guess the missing words, which are revealed by clicking the spaces.

**Song lyrics**
Listen to the song *Five senses* and follow the lyrics line by line.

**Poster**
Unit 1 poster *Our skin* focuses on describing texture and surfaces. You can use the poster in the following ways:
- Ask pupils at the end of class to come up to the poster individually and tell you something about it before they line up to leave (before lunch, change of class, etc.).
- When you are studying page 15, use the poster to help you input new vocabulary.
- To review page 15, ask pupils to choose a texture on the poster and find an object in the class with the same texture.

**Videos**
Use the video links in this unit to present content in a dynamic, real-life context while reinforcing the pupils’ listening skills.

**Teachers**

**Digital flashcards and wordcards**: *sight, hearing, smell, taste, touch*

**Downloadable pdfs**: evaluation tests, evaluation grids, templates, useful links and further information.
The human body is an amazing, complex machine. It is made up of different parts that have different functions. These parts are called organs. They work together so we can breathe, eat food and move blood around our body. Our eyes, ears, nose and tongue also help us to interact with the world around us.

Language
- Question words: who, how many, etc.
- Prepositions of place: in, on, under, next to
- There is / are
- Vocabulary: heart, lungs, skeleton, joints, bones, five senses, tongue, eye, nose, skin, ear

Additional materials
- Digital flashcards
- Digital wordcards

Page 7, Unit introduction (CD1 track 02)
- Read the unit introduction at the top of page 7. Pupils can do a choral reading of the text (see Helpful tips, pages 20–23).
- You can play the audio of the unit introduction first, with the pupils reading along with it, and then ask one or two pupils to read out loud. This way, pupils will feel more self-assured when it comes to pronouncing new words.
• Divide the pupils into small groups to answer the questions at the top of page 7. Then invite different groups to compare their answers with each other.

1. **Name the parts of the body you can see in the picture.**

   • Elicit the organs of the five senses. Point out the model of the human torso on the shelf in the background and see if they can name any internal organs. They might know the words *brain* and *heart*, which they will see again in the story. **Open answer.**

2. **Point to someone who is using their senses.**

   • Tell pupils to find examples of people using their senses in the picture. Some ideas include – **Sight:** the boy doing an eye test. **Hearing:** girl with a stethoscope. **Smell:** boy smelling a flower. **Taste:** the girl licking a lollipop. **Touch:** the boy touching the other boy’s shoulder because he cannot see.

3. **Find someone who is taking care of their body.**

   • Ask pupils which people in the picture are looking after their bodies. The girl washing her hands and the boy doing an eye test.

4. **Who is not behaving properly?**

   • Ask the pupils which children in the picture are not behaving well. The boy and girl chasing each other and hiding under the table.

5. **Listen to the song. Point to the words you hear.**

   • Focus the pupils’ attention on the five photos. Ask them to read and repeat the words. Check for understanding.
   • Play the song *Five senses (CD1 track 03)* and ask pupils to point to the words that they hear. Then play the song a second time and encourage pupils to sing along (you can use the Song lyrics section on the digital component to display the song line by line and listen to the song). Nose, ear, skin, tongue, eye.

---

CD1 • track 03

*Five senses, five senses*

*All together, the world is clear [x2]*

*I can smell a pretty rose*

*Smell, smell with my nose*

*I can hear people talk*

*Hear, hear with my ear*

*Cold water on my hands*

*Feel, feel on my skin*

*A tasty lollipop*

*Taste, taste with my tongue.*

*Things around me, colours and shapes*

*See, see with my eye.*

*Five senses, five senses*

*All together, the world is clear [x2]*

---

**CLOSING ACTIVITIES**

• Play the Stand up, sit down game using the song to review the vocabulary of the sense organs. Pupils stand up and sit down quickly every time they hear one of the sense organs.

**EXTRA IDEAS**

• Show images of other animals’ sense organs, encourage reactions and discuss why these may have developed in such ways (a bat’s ears, a pig’s nose, etc.).

---

**ANSWERS AT A GLANCE**

1. **Open answer.**

2. Some ideas include – **Sight:** the boy doing an eye test. **Hearing:** the girl with a stethoscope. **Smell:** the boy smelling a flower. **Taste:** the girl licking a lollipop. **Touch:** the boy touching the other boy’s shoulder because he cannot see.

3. The girl washing her hands and the boy doing an eye test.

4. The boy and girl chasing each other and hiding under the table.

5. Nose, ear, skin, tongue, eye.
**A trip to the doctor**

**Listen and read.**

1. Listen and read. (CD1 track 04)

- Play the Five senses song (CD1 track 03) and encourage pupils to sing along.
- Play Simon Says to review the parts of the body. (Simon says touch your elbow/knee).
- Play a memory game with the opening illustration on pages 6 and 7. With their books closed, pupils tell you details they can remember from the illustration.

**PAGE SUMMARY**

This double-page spread opens with a story in which your pupils have the opportunity to see Carla and Alex at a particular moment of their school trip to the doctor’s surgery. Carla and Alex are talking to the doctor and showing their knowledge of parts of the body. The story is reinforced with an exam style matching activity that is related to the story and opening double-page spread. On page 9, the pupils can study Carla and Alex’s school trip project about parts and sections of the body.

**LANGUAGE**

- Present simple of the verb to be
- Vocabulary: arms, legs, knees, elbows, chest, head, brain, heart, limbs, joints, organs, eyelashes

**ADDITIONAL MATERIALS**

- Digital flashcards
- Digital wordcards
- Extra classroom materials: magazines for cutting out pictures of people for the school trip project; sticky notes

**OPENING ACTIVITIES**

- Play the Five senses song (CD1 track 03) and encourage pupils to sing along.
- Play Simon Says to review the parts of the body. (Simon says touch your elbow/knee).
- Play a memory game with the opening illustration on pages 6 and 7. With their books closed, pupils tell you details they can remember from the illustration.

**MAIN ACTIVITIES**

1. **Listen and read.** (CD1 track 04)

- Draw the pupils’ attention to the story at the top of page 8 and explain to them that they are going to listen to a story about Alex and Carla’s trip to a doctor’s surgery. Say Let’s listen and read. Play the audio.
- Ask pupils to look at each of the illustrations and describe what is happening in each one using their own words. For example, Carla is moving the skeleton’s arms; Alex is bending the skeleton’s elbows.
- Divide pupils into groups of three and ask them to choose a character from the story – Alex, Carla or the doctor. Pupils then read their part of the story aloud in their small group. You can invite a group to the front of the class to act the story out.
Look at the story. Then read the descriptions below and match them to the pictures.

- This activity aims to introduce some new vocabulary, reinforce what pupils have learned in the story and refresh concepts studied in previous levels. Give pupils clues to help them: We use this part of our body for moving, walking, running, kicking, etc. 1–B (leg), 2–D (eyelashes), 3–E (elbow), 4–A (torso), 5–C (nose).

SCHOOL TRIP PROJECT

- Before the pupils open their books, elicit the different parts of the body included in the photo on page 9 using your body as a model. Ask a volunteer to come to the board and draw a head. Ask another volunteer to draw a simple torso. Finally ask a volunteer to draw limbs.

- Explain to the pupils that following their trip to the doctor’s surgery, Alex and Carla have done a project to summarise what they have learned about parts of the body.

- Tell pupils to look at the photo on page 9 and ask for volunteers to read the words.

Copy the picture and the words in your notebook. Add four more words to the picture.

- Tell the pupils to copy the picture and words from the book and add at least four more words, then share their ideas with a partner. You could prepare an outline drawing of a body for the pupils or they could cut out pictures from magazines. Encourage peer correction of spelling if appropriate. Open answer.

Alex wants to add the word knuckle to the picture. Where can we find this joint? Add the word.

- This will be a new word for pupils. Knock on the board and ask them to do the same on their tables. Elicit the idea that we are using our knuckles to make the noise. Drill pronunciation. Point out the silent k and ask if they can think of another part of the body with a silent k (knee). Ask them to add the new word to their picture. We can find this joint in our hands.

Name the three main sections of the body. Do other animals have the same main sections?

- Use images from the internet or the flashcards from units 4, 5 and 6 to show different animals and identify their body parts. If you are using an interactive whiteboard, ask for volunteers to come up to the board and label the parts of the body on the animals. Lots of different types of animals have a head, a torso and limbs.

CLOSING ACTIVITIES

- Review vocabulary and spelling of parts of the body. Divide the pupils into small groups. Hand out sticky notes and ask the pupils to come up to the board and label the parts of the body on the animals. The rest of the group label their classmate with the parts of the body written on sticky notes.

EXTRA IDEAS

- Pupils find pictures of different animals at home and make a display. They label the body parts they can see.

ANSWERS AT A GLANCE

Page 8

1–B (leg), 2–D (eyelashes), 3–E (elbow), 4–A (torso), 5–C (nose).

Page 9

1 Open answer.

2 We can find this joint in our hands.

3 Lots of different types of animals have a head, a torso and limbs.
Our body is like a complex machine. It has lots of parts that work together. The most important parts are called organs and they form body systems. We are going to look at three body systems: the circulatory system, the respiratory system and the digestive system.

**Circulatory system**
The circulatory system moves blood through the heart and around the body in the arteries and veins. Blood gives our body nutrients and oxygen.

**Respiratory system**
The respiratory system is a group of organs that work together to help us breathe.
- We breathe in air through our nose and mouth.
- The air goes down into our lungs, a process that is part of the circulatory system, where it carries around our body.
- We breathe in oxygen and breathe out carbon dioxide.

**Digestive system**
The digestive system is a group of organs that work together to help us digest food.
- We take in food through our mouth.
- It passes down into our stomach and intestine.
- The intestine separates the nutrients from the waste and expels the waste from our body.
- The nutrients are passed to the circulatory system, where they move around the body.

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**PAGE SUMMARY**

This double-page spread introduces pupils to three body systems: the circulatory system, the respiratory system and the digestive system. There is a lot of new vocabulary and concepts on this double page. Do not expect pupils at this stage to absorb all of the information; the main learning aim is to understand how internal organs work together to carry out vital functions and how each organ has a particular role.

**LANGUAGE**

- Questions words: where, what, why, etc.
- Vocabulary: circulatory system, respiratory system, digestive system, heart, arteries, veins, nutrients, oxygen, atriums, ventricles, lungs, carbon dioxide, stomach, intestine, breathe in, breathe out, digest, expel, separate

**ADDITIONAL MATERIALS**

- Digital flashcards
- Digital wordcards

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**OPENING ACTIVITIES**

- If you are using an interactive whiteboard, click on the opening text on page 10 and highlight the first sentence, *Our body is like a complex machine.* Alternatively, ask pupils to open their books on page 10 and point to the first sentence. Write the word *machine* on the board and ask for examples of machines, e.g. car, robot. Write them on the board. Elicit ideas of why the human body is like a machine. *(It can do lots of different things, we move, run, talk, it has lots of parts).* Explain that they are going to learn about three body systems that help our bodies work like machines; The circulatory system, the respiratory system and the digestive system.

**MAIN ACTIVITIES**

**Page 10, Body systems (CD1 track 05)**

- Read the introduction text with the class. Model the pronunciation of *circulatory, respiratory, and digestive.* Ask pupils to look at the illustrations on pages 10 and 11 and predict in pairs what the three systems do. *Moves blood around our body, helps us breathe, helps us eat.*
Page 10, Circulatory system (CD1 track 06)
• Before you read the text, ask pupils to look at the two illustrations and examine the heart, the arteries and the veins and describe them. Veins are look blue, arteries are look red, our heart is made up of two parts, etc. This is a good moment to draw the pupils’ attention to the Did you know? box.
• Read the text on page 10 and check understanding. What moves through the heart and in the veins and arteries? What does blood give our bodies?

Page 11, Respiratory system (CD1 track 07)
• Before you read the text, ask pupils to look at the illustration. Read out the labels and get the pupils to point to their nose, their mouth and their chest area as you say the words.
• Read the text on page 11 and check understanding. You can ask direct questions or ask pupils to finish your sentences in chorus. The respiratory system helps us ... ; we breathe in oxygen and we breathe out ... .

Page 11, Digestive system (CD1 track 08)
• Before you read the text, ask pupils to look at the illustration. Read out the labels and drill pronunciation. Ask them to point to their mouth and the area of their stomach and intestine.
• Read the text on page 11 and check understanding. What does the digestive system help us do? Food goes through our mouth and passes down into our... ; The intestine separates the nutrients from the ... .

1 Name the organs that form the circulatory, respiratory and digestive systems.

• Encourage pupils to write their answers in a clear list or table to help them revise later. Circulatory system: heart. Respiratory system: nose, mouth, lungs. Digestive system: mouth, stomach, intestine.

2 Explain how each body system works. Draw diagrams to help you.

• Encourage pupils to draw very simple diagrams in their notebooks. In pairs, ask them to explain in their own words how each system works. Open answer.

3 Think of three things that are bad for our respiratory system.
• Use this activity to encourage pupils to think about how important it is for us to take care of our bodies. They can work in small groups or it can be done as a class brainstorming activity on the board. Pollution, illnesses such as colds and flu, smoke, pollen, etc.

4 Our intestine is divided into two parts: the large intestine and the small intestine. Find out how long they are.
• This activity can be done at home with the help of parents or in small study groups on a computer or in the library. Large intestine about 1.5 m. Small intestine about 6.7 m.

CLOSING ACTIVITIES
• Test the pupils on a few basic concepts from pages 10 and 11 using error correction. Ask pupils to correct your mistakes. The circulatory system moves water around our bodies. We breathe in through our nose and stomachs. We take in food through our ears. You can make the incorrect words comical.

EXTRA IDEAS
• Play Odd one out with the body systems. Say the odd one out: blood, veins, mouth; mouth, stomach, lungs, etc.

ANSWERS AT A GLANCE
2 Open answer.
3 Pollution, illnesses such as colds and flu, smoke, pollen, etc.
4 Large intestine about 1.5m. Small intestine about 6.7m.
On this double-page spread pupils revise the senses of sight and hearing. This subject matter will be familiar to them by now. The different parts of the eye and the ear, however, will be new vocabulary and should be the focus of this page. Page 13 introduces the pupils to a detailed explanation of how our eyes and ears work. Depending on the level of your class, this can be done in greater or lesser detail. The important learning aim is to provoke interest in how amazing the processes of sight and hearing are.

**Language**

- Questions words: where, what, why, etc.
- Sequence words: then, next, after that, etc.
- Vocabulary: sight, pupil, iris, lens, retina, eyebrow, eyelid, eyelashes, sweat, dust, hearing, outer ear, middle ear, inner ear, earwax; interact, protect, reflect, vibrate; sticky

**ADDITIONAL MATERIALS**

- Digital flashcards
- Digital wordcards

**PAGE SUMMARY**

On this double-page spread pupils revise the senses of sight and hearing. This subject matter will be familiar to them by now. The different parts of the eye and the ear, however, will be new vocabulary and should be the focus of this page. Page 13 introduces the pupils to a detailed explanation of how our eyes and ears work. Depending on the level of your class, this can be done in greater or lesser detail. The important learning aim is to provoke interest in how amazing the processes of sight and hearing are.

**OPENING ACTIVITIES**

- Ask pupils to work in pairs or groups and brainstorm the human organs they know so far. Encourage them to think about body systems and the sense organs, which they have studied previously in the unit. Ask for volunteers to share their ideas and spell the words out loud. Add them to the board and correct spelling as a group if necessary.
- Tell pupils to close their eyes and describe what they see. Nothing, red, patterns, etc. Ask them to explain how we close our eyes and elicit the word eyelid. You can explain the meaning of the word lid in other contexts. A lid on a box closes the box.
- Write the word eyelid on the board and ask them to think of two other parts of the eye that start with the letter e. Eyelashes, eyebrow.

**MAIN ACTIVITIES**

**Page 12, Our eyes and ears are organs (CD1 track 09)**

- Ask pupils to open their books on page 12 and read the introduction text. Brainstorm what we can see and hear. Shapes, colours, sizes, loud sounds, quiet sounds, etc.

**ADDITIONAL MATERIALS**

- Digital flashcards
- Digital wordcards
Page 12, Sight (CD1 track 10)

• Before you read, draw three columns on the board: What we can see; Parts of the eye; Protection. Give pupils time to read quietly and think about words for each column.

• Add their suggestions to the board. Read the text again as a group (see Helpful tips, pages 20-23) and check pronunciation of the main parts of the eye.

1 What colour are the pupils? And the iris?

• Start the sentences on the board and ask pupils to complete them in their notebooks. Ask them to add what colour their iris are. Pupils are black and irises can be different colours. My irises are (blue).

2 Name the parts of the eye that protect it.

• Ask the pupils to close their books, draw a picture of an eye and label the parts that protect it from sweat and dust. When they have finished, ask them to open their books and check their spelling. Eyebrow, eyelid, eyelashes.

3 In pairs, look at each other’s eyes and identify the different external parts of the eye.

• This activity is a combination of activities 1 and 2 but interactive. Allow pupils time to really examine each other’s eyes and look at the way the pupil changes size. Pupil’s identify the eyelid, eyebrow, iris, pupil and eyelashes.

Page 12, Hearing (CD1 track 11)

• Draw the three columns on the board again for the hearing text: What we can hear; Parts of the ear; Protection. Give pupils time to read quietly and think about words for each column.

• Add their suggestions to the board. Read the text again as a group (see Helpful tips, pages 20-23).

4 What does earwax do?

• Pupils answer the question in their notebooks. Earwax protects our ears from dirt and infection.

Page 13, How our eyes and ears work

• Draw a picture of a brain, an eye and an ear on the board. Say We see and hear things because our eyes and ears send signals to our brain. Draw movement lines to illustrate this. At this age, the details of how the eye and ear works is complex so use the illustrations and text boxes to provoke interest in the process, rather than focusing on the details.

5 Name the control centre of the body. What does it do?

• Ask pupils to write a full sentence in their notebooks. You can give them the key words to help them. The brain is the control centre of the body. It reads signals.

6 What can we do to look after our eyes and ears?

• Pupils can work in small groups or answer the question at home with the help of their parents. Wear sunglasses, glasses, visit the doctor, wear ear plugs when swimming etc.

EXTRA IDEAS

• Use the internet to show pupils the amazing array of eye colours. Carry out a class survey to see which is the most common eye colour in the class.

ANSWERS AT A GLANCE

1 Pupils are black and irises can be different colours.

2 Eyebrow, eyelid, eyelashes.

3 Earwax protects our ears from dirt and infection.

4 The brain is the control centre of the body. It reads signals.

5 Pupil’s identify the eyelid, eyebrow, iris, pupil and eyelashes.

6 Wear sunglasses, glasses, visit the doctor, wear ear plugs when swimming, etc.
UNIT 1
PAGES 14–15  Smell, taste and touch

Our nose and tongue work together

Smell
- Our nose is the organ we use to smell.
- Air enters the nose through the nostrils.
- The olfactory nerve sends information to our brain which tells us what we can smell.
- Our nose can smell about 10,000 different odours.

Taste
- Our tongue is the organ we use to taste.
- Our tongue is covered in taste buds. These identify different tastes.
- Nerves send information about the different tastes to our brain.

Our skin
- Our skin is the organ we use to touch.
- Our body is covered in skin. It is the largest organ in the human body.
- Our skin can tell us if something feels soft or hard, hot or cold, rough or smooth.

- PAGE SUMMARY
On this double-page spread the pupils revise the senses of smell, taste and touch. This subject matter will be familiar to them by now. The main learning aim is to further their knowledge of how we smell, taste and touch and which organs and parts of the body work together to do so. It is probably the first time they will reflect on how taste and smell are connected.

- LANGUAGE
- Vocabulary: nostrils, olfactory nerve, odour, taste buds, skin, sensory nerve; sweet, salty, bitter, sour, hot, cold smooth, rough, hard, soft

- ADDITIONAL MATERIALS
- Digital flashcards
- Digital wordcards
- Unit 1 poster

- OPENING ACTIVITIES
- Bring in some perfume or air freshener and spray it before the class starts. Ask pupils what it smells like. Write their ideas on the board.
- Put pupils in small groups and ask them which smells they like and dislike. They can draw pictures to illustrate their ideas.
- Bring in objects to do a smell test or taste test. You can either tell pupils to categorise the smells and tastes as good or bad, or blindfold pupils and tell them to guess what they are smelling or tasting. Try to elicit some of the key vocabulary from the texts: salty, sweet, bitter, sour.
- Pass around different objects or substances and ask pupils to think of words to describe how they feel: soft, hard, smooth, rough, hot, cold. Alternatively, put objects in a bag and ask volunteers to feel one of the objects without looking, guess what it is and describe how it feels.

- MAIN ACTIVITIES
Page 14, Our nose and tongue work together
Smell (CD1 track 12); Taste (CD1 track 13)
- Ask the pupils to look and listen to you and keep their books closed. Read out the texts about the senses of smell and taste or play the audio. As you read or listen, point to the parts of the body as they are mentioned to help the pupils understand the vocabulary.
Tell pupils to open their books on page 14 and read the texts as a group. You can use the Read and repeat activity (See Helpful tips, pages 20-23).

**What does the olfactory nerve do?**

- If you are using an interactive whiteboard, ask pupils to close their books and zoom in on the illustration. Ask pupils to complete the sentence: The olfactory nerve sends ____ to our ______. You can write the sentence on the board and ask for volunteers to spell the words information and brain. They can copy the sentence in their notebooks. The olfactory nerve sends information to our brain.

**Honey is sweet. Point to where we taste sweet things.**

- Ask pupils to point to their tongue. Ask them to examine the illustration and point to the part of the tongue we use to taste sweet things. Pupils point to the tip of their tongue.

**Draw a diagram of the tongue and four foods that taste sweet, sour, salty and bitter. Match the foods to the tongue.**

- Encourage pupils to think of different foods or they can add the examples used in class from the opening activities. Open answer.

**Page 15, Touch (CD1 track 14)**

- Ask pupils to open their books on page 15. You can play the audio and encourage the pupils to read along in their books or use one of the reading activities on page 20.
- Provide pupils with time to look at the photos on page 15. Ask pupils to find examples of objects with these properties in the classroom.

**Explain why touch is such an important sense. Do you think taste and smell are as important?**

- Encourage pupils to think about how our sense of touch protects us from danger. We feel hot things. We feel pain. Put the pupils into small groups to discuss the second half of the question. If they had to live without one, which one would they miss more and why? Our sense of touch protects us from danger.

**Make a list of rough and smooth objects.**

- Pupils can work in small groups. You can make classroom posters to display their ideas. Open answer.

**Discuss why the skin on our fingertips is so sensitive.**

- Encourage pupils to close their eyes and touch things with their fingertips and then with the back of their hands to see how different the sensation is. We can explore and identify (very small) objects. It warns us about dangers.

**Closing Activities**

- Play Memory with wordcards of key vocabulary from pages 12-15. (See pages 20-23 for instructions of how to play and for more wordcard games.)

**Extra Ideas**

- Draw the pupils’ attention to the word odours. Ask Can you think of words to describe odours? Sweet, strong, nice, disgusting, fruity, etc. Test them with different objects.
- To prove how our nose and tongue work together, do a taste test. Ask pupils to hold their noses to begin with, then let go. What do they notice? Have they ever done this with food they don’t like?

**Answers at a Glance**

1. The olfactory nerve sends signals to our brain.
2. Pupils point to the tip of their tongue.
3. Open answer.
4. Our sense of touch protects us from danger.
5. Open answer.
6. We can explore and identify (very small) objects. It warns us about dangers.

**Teacher's Book 45**
**Find out / Think about it**

**Find out**

**Idea:**
We can trick our brain to see things that are not real.

**Materials:**
- Card
- Pencil
- Colouring materials
- Tape

**Test:**
Make an optical illusion of a bird in a cage.

1. Cut out two circles. Draw a bird on one and a cage on the other.
2. Stick the circles of card to the end of the pencil with tape.
3. Spin the pencil and observe what happens. What do you see?

**Conclusions**
1. Describe what you see when you spin the pencil?
2. How do you think optical illusions happen?
3. Investigate other types of optical illusions. Make a poster to present what you discover.

**Think about it**

**Visual impairment**

A person with visual impairment cannot see very well or cannot see at all. People who cannot see at all are blind. Some people are born with visual impairment, and some people begin to have problems with their sight as they grow older.

There are lots of ways of helping people who cannot see. Look at the pictures and explain how these things help people with visual impairment.

**A different way of seeing the world**

- Pedestrian crossing
- Audio book
- Guide dog
- Braille
- White cane

**Test:**
Make an optical illusion of a bird in a cage.

- Cut out two circles. Draw a bird on one and a cage on the other.
- Stick the circles of card to the end of the pencil with tape.
- Spin the pencil and observe what happens. What do you see?

**Conclusions**
1. Describe what you see when you spin the pencil?
2. How do you think optical illusions happen?
3. Investigate other types of optical illusions. Make a poster to present what you discover.

**Language**

- Imperatives: cut, draw, stick, spin, observe
- Vocabulary: card, cage, optical illusion, trick

**Additional materials**

- Digital flashcards
- Extra materials: cartoon or animation clip; medicine boxes with Braille; a blindfold

**Page summary**

In the first of these two pages (Find out), pupils make an optical illusion to demonstrate that our eyes send signals to our brain. The second page (Think about it) provides your pupils with the opportunity to learn about living without one of our senses and how visually impaired people can use specially prepared objects and tools to help them maintain their autonomy and carry out everyday tasks.

**Opening activities**

- If you have time, show pupils a moment from a cartoon or an animation. Animations with plasticine work well.
- Show the pupils the clip a few times then ask them to tell you what they can remember. They will probably tell you a few things with action verbs (the mouse is running, the man is driving a car). Add these ideas to the board.
- Then, show them a still moment from the clip in a photo or screen shot and ask them if the characters are moving now. Explain that cartoons are made up of lots of individual pictures, like the one you have just shown them, that flick from one to another very quickly. Our brain sees the cartoon moving. We cannot see the individual pictures because they move so quickly.

**Main activities**

- Explain to pupils that they will be making a simple optical illusion with basic materials to observe how our eyes trick our brain into seeing something that is not real.
- Ask pupils to read the steps on page 16. Then, tell them to write the materials and the three steps in their notebook. If you are using the book on the interactive whiteboard, you can play the audio of the steps.
• You may choose to do this investigation together as a class or allow small groups to go through the steps independently.

+ CLOSING ACTIVITIES

1 Describe what you see when you spin the pencil?

• Give pupils time to enjoy spinning the pencil and seeing the optical illusion. Encourage the pupils to answer in full sentences. *I/we can see the bird in the cage.* Ask the pupils Is it a clear picture or a blurred picture? (help pupils with their understanding of the word *blurred*). This clarification helps to explain the idea that our brain is a bit confused by what it sees.

2 How do you think optical illusions happen?

• Ask the pupils What sends signals to our brain when we see something? *Our eyes.* Does the pencil have one picture or two attached to it? *Two.* If you move the pencil slowly, can you see the bird in the cage? *No.* The illusion happens when we spin the pencil quickly. It moves so fast that the two pictures fuse into one and our brain hasn’t got time to separate the images.

3 Investigate other types of optical illusions.

Make a poster to present what you discover.

• There are lots of optical illusions for children on the internet. Put the pupils in groups to investigate in class on the computer, or ask them to investigate with their parents at home. They can display their posters around the school for other children to enjoy.

THINK ABOUT IT

+ OPENING ACTIVITIES

• Ask pupils to imagine what it would be like not to see. You can blindfold a volunteer. Ask them How do you feel? Which sense are you using more to help you? Ask the class Do you know anyone who has problems seeing? Do they use anything special to help them? Try to elicit some of the ideas in the photos.

MAIN ACTIVITIES

• Ask pupils to open their books on page 17 and say Let’s read about people who cannot see very well or cannot see at all. If you are using the interactive whiteboard, you can play the audio and encourage pupils to read along in their books.

• Then, ask pupils to look at the pictures and describe what they can see in pairs. You can bring in empty medicine boxes with Braille and let them touch with their eyes closed and describe what they feel.

+ CLOSING ACTIVITIES

1 Discuss other ways visually impaired people can enjoy books.

• Ask pupils Have you ever listened to a recorded story or a book? Did you enjoy it? Do you think it is difficult to learn to read Braille? Elicit other ways people can enjoy a book or a story. *People can read stories for them, some e-readers have audio.*

2 Identify changes we can make to computers so that visually impaired people can use them more easily.

• Put pupils into small groups and ask them to think about how they would use a computer to write an email. Encourage them to think of the basic steps and which of those steps are difficult for someone with visual impairment. Encourage them then to think of solutions to these difficulties. *Braille keyboards, words on screen electronically spoken, sounds when the pointer is on an icon.*

3 What other things can you see in the street and in public buildings that help visually impaired people do daily activities?

• Pupils can start be identifying what is in the photo. *Different surfaces in the metro, and the street, to tell you are near the edge; automatic doors; sounds, etc.*
Study skills

1. Copy and complete.

The human body

• animals
• plant
• birds
• fish
• mammals

2. Use a spider diagram to organise what you know about body systems.
   - Write the main subject in the middle.
   - Add legs for each section.
   - Add the information to each section.

Tip: Start your spider diagram in pencil first. If you make a mistake you can rub it out.

3. Match the organs to the systems in your notebook.
   1. Circulatory system
   2. Respiratory system
   3. Digestive system

4. In pairs, talk about ways to look after your eyes. Use the words to help you.
   - You should wear sunglasses in summer.
   - You should go to the doctor regularly.
   - You shouldn’t use the computer for too long in dark light.

Review

1. Match the organs to the systems in your notebook.
   1. Circulatory system
   2. Respiratory system
   3. Digestive system

2. Which senses are they using?
   - They are using their eyes.
   - They are using their ears.

3. True or false? Copy the sentences and correct the ones that are false.
   1. Blood moves around the body through the lungs.
   2. We breathe in carbon dioxide and breathe out oxygen.
   3. The brain is the control centre of the body.
   4. Our respiratory system takes the food we eat to our stomach and brain.

4. In pairs, talk about ways to look after your eyes. Use the words to help you.
   - You should wear sunglasses in summer.
   - You should go to the doctor regularly.
   - You shouldn’t use the computer for too long in dark light.

PAGE SUMMARY

This double-page spread allows pupils the opportunity to organise what they’ve learned in the unit by means of a concept map. They can also learn a new study skill – pupils design spider diagrams to help them summarise what they have learned in the unit. On the Review page, pupils complete activities individually to check their understanding of material covered in this unit. Activity 4 is a pairwork speaking activity to encourage them to create complete, accurate sentences and identify and use a simple structure (should / shouldn’t). It is also a peer evaluation opportunity.

LANGUAGE

- Imperatives: match, write, copy, correct, talk, use, work
- Should / shouldn’t + infinitive
- Encourage pupils to speak and write in complete sentences.

ADDITIONAL MATERIALS

- Digital flashcards
- Digital wordcards

OPENING ACTIVITIES

- Play a game with the opening illustration on pages 6 and 7. Pupils look at the illustration and point to what you describe (you can review a lot of the vocabulary from the unit using the opening illustration). This works well on the interactive whiteboard as you can ask two pupils or teams to come to the board and use the writing tools to mark their answers. It can be a race.
- Review vocabulary by playing the Tap it game with wordcards from this unit (see Helpful tips, pages 20-23).
- Stick the wordcards on the board in reach of the pupils.
- Divide the class into two teams. Call a pupil from each team to stand in front of the wordcards.
- Give clues, for example: It’s an organ. It helps us breathe. We can feel them expand when we breathe in.
- The first pupil to tap the correct card gets a point. Repeat several times.
**MAIN ACTIVITIES**

**Page 18, Study skills**

1. **Copy and complete.**
   - Remind pupils that when we organise new information, it is easier to understand and remember it.
   - Focus the pupils’ attention on the concept map and ask them to tell you what the missing words are. Encourage them to make full sentences, such as *The human body is made up of three main sections: head, torso and limbs.*
   - Tell them to copy and complete the concept map in their notebooks.

2. **Use a spider diagram to organise what you know about body systems.**
   - If this is the first time your class has used a spider diagram, spend some time explaining how they help you learn and how to draw them (*they help you make connections between related concepts and work well for visual learners*).
   - Pupils copy the diagram in their notebooks. Remind them to start in the centre of the page and leave plenty of space around the sides to add more words if they want (they could add the five senses to this diagram, for example).
   - Encourage the use of colours and capital letters for key words.
   - This could be a pairwork activity drawn on A3 card to display later on the wall.

**Page 19, Review**

**Note:** This part of the review can be done with minimal teacher guidance. You may wish to work through the activities as a class or in small groups or partners. Alternatively, you can ask pupils to do them individually as self-evaluation. This review could also be done as homework.

1. **Match the organs to the systems in your notebook.**
   1. Circulatory system: (A) heart and (c) veins and arteries
   2. Respiratory system: (D) lungs
   3. Digestive system: (B) stomach and (E) intestine

2. **Which sense are they using? Write.**
   - The first picture shows a girl using her sense of hearing.
   - The second picture shows a boy using his sense of smell.
   - The third picture shows a boy using his sense of taste.
   - Encourage pupils to explain what the children in the photos are doing and any other observations to provide some extra speaking practice.

3. **True or false? Copy the sentences and correct the ones that are false.**
   1. False: Blood moves through the arteries and veins.
   2. False: We breathe in oxygen and breathe out carbon dioxide.
   3. True.
   4. False: Our digestive system takes the food we eat to our stomach and brain.

4. **In pairs, talk about ways to look after your eyes. Use the words to help you.**
   - You should wear sunglasses in summer. (*To protect your eyes from bright sun.*)
   - You should go to the doctor regularly. (*So they can check your health. You can elicit other health providers if you have time, such as the dentist, optician, etc.*)
   - You shouldn’t play on the computer too long. (*It’s bad for your eyes. It’s better to do a variety of activities every day. It is better to do more physical activity.*)
   - You shouldn’t read in bad light. (*It’s bad for your eyes. It can give you a headache.*)
UNIT 1
Activity Book answers / Audio CD1 track list

UNIT The human body

2 Write the parts of the body. Draw lines.

1. eye
2. arm
3. elbow
4. leg
5. foot
6. hand
7. knee
8. ankle

3 Cross out the mistake in each sentence. Write the correct word or words.

a. The circulatory system moves ______ through the heart and around the body.
   - blood
b. Blood gives our body ______ and ______.
   - oxygen, four

c. The heart is divided into ______.
   - four

d. Oxygen is passed to the circulatory system, where it moves around our body.

4 Underline the sentences to describe how the respiratory system works.

a. Air goes down into our lungs.
b. We breathe in air through our nose and mouth.

5 Complete the text about the digestive system.

The digestive system is a group of organs that work together to help us digest ______.

We take in food through our ______. It passes down into our stomach and ______.

The intestine separates the ______ from the ______ and expels the waste from our body.

The nutrients are passed to the ______ system, where they move around the body.

6 Write the words under the pictures.

mouth, stomach, lungs, intestine

7 Look at the photos. Write sentences.

Our ears are the organs we use to hear.
Our tongue is the organ we use to taste.
Our nose is the organ we use to smell.
Our eyes are the organs we use to see.

8 Complete the sentences using the words in the box.

a. Light enters the eye through the ______.
   - pupil
b. The light goes through the lens and makes an image on the ______.
   - retina
c. The extra sends information to the ______.
   - brain
d. Eyebrows, eyelashes and eyelids ______ our eyes.
   - protect

9 Order the sentences to explain how we hear.

a. The brain reads the signals and tells us what we can hear.
b. Sound waves enter through the outer ear.
c. The waves hit the eardrum in the middle ear and make it vibrate.
d. The liquid in the inner ear moves and sends signals to the brain.

10 How do these things taste? Write sentences.

Cakes taste sweet.
Chips taste salty.
Lemon tastes bitter.

hot, cold, smooth, hard, rough, soft

11 How do these things feel? Use the words from the box. You can use more than one word.

Our skin is the organ we use to touch.

Olives taste bitter.
Lemon tastes bitter.
Cakes taste sweet.
Chips taste salty.

hot, cold, smooth, hard, rough
6 Find out at home!
Investigate different tastes at home:
1. Choose five items of food. Ask your mum or dad to choose five different items of food.
2. Do a taste test:
   a. Close your eyes.
   b. Ask your mum or dad to pass you their food items.
   c. Taste them. How do they taste?
   d. Open your eyes. What was it?
   e. Ask your mum or dad to close their eyes and repeat the test with your food items.
3. Write your results in the table.

<table>
<thead>
<tr>
<th>Me</th>
<th>My mum / dad</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
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</table>

Skills check
Read the text. Choose the right words and write them on the lines.

Look after your eyes
There are lots of things you can do to look after your eyes:
1. Turn on the lights when it is getting dark.
2. Wear sunglasses and a hat on sunny days.
3. Never look directly at the sun.
4. Tell your teacher if you cannot see the board or the text in your book clearly.
5. If you wear glasses, don’t let other people use them. Don’t wear other people’s glasses.

a. How many food items did you guess correctly?
   Open answers.

b. Which foods and tastes did you like? Which didn’t you like?

Unit 1 Audio CD1 track list

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<thead>
<tr>
<th>TRACK</th>
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<th>ACTIVITY</th>
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<td>08</td>
<td>Pupil’s Book page 11, Digestive system</td>
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<td>03</td>
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<td>09</td>
<td>Pupil’s Book page 12, Our eyes and ears are organs</td>
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## CONTENT EVALUATION CRITERIA

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>EVALUATION CRITERIA</th>
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<tbody>
<tr>
<td>Living and non-living things.</td>
<td>Understand the difference between living and non-living things.</td>
</tr>
<tr>
<td>Classifying living things.</td>
<td>Through direct and indirect observation, use scientific criteria to identify and classify living things.</td>
</tr>
<tr>
<td>Care and respect towards living things.</td>
<td>Understand the importance of care and respect towards living things.</td>
</tr>
<tr>
<td><img src="https://via.placeholder.com/150x150" alt="" /> First approaches to scientific activity and the scientific method. Use of different information sources (direct and indirect). Use of ICTs.</td>
<td>Obtain relevant information about specific phenomena, make predictions, integrate information from direct and indirect observation and communicate the results.</td>
</tr>
<tr>
<td>First approaches to simple experiments and investigations.</td>
<td>Conjecture as to the results of natural occurrences and of simple experiments and investigations.</td>
</tr>
<tr>
<td>Individual and group work.</td>
<td>Work independently and proactively and develop strategies for working in a group.</td>
</tr>
<tr>
<td>Planning a project and presenting a report.</td>
<td>Carry out a project and present a report.</td>
</tr>
<tr>
<td>LEARNING STANDARDS</td>
<td>KEY COMPETENCES</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Observes, identifies and explains the differences between living and non-living things.</td>
<td>MST, LIN</td>
</tr>
<tr>
<td>Shows an interest in the observation and study of all living things.</td>
<td>LTL, AUT</td>
</tr>
<tr>
<td>Observes living things using secondary sources (books, technological, audiovisual, etc.).</td>
<td>MST, LTL, AUT</td>
</tr>
<tr>
<td>Observes and identifies the characteristics of different living things.</td>
<td>MST, LIN</td>
</tr>
<tr>
<td>Classifies living things into groups according to their characteristics.</td>
<td>MST, LIN</td>
</tr>
<tr>
<td>Shows a positive and active attitude towards the conservation and care of different living things.</td>
<td>MST, LIN</td>
</tr>
<tr>
<td>With help, selects and organises specific and relevant information; analyses it and draws conclusions; reflects on the experience and the process; presents the results.</td>
<td>MST, LTL</td>
</tr>
<tr>
<td>Uses books, libraries, etc. and collaborates in the care and maintenance of all the materials available in the school and the classroom.</td>
<td>MST, LTL</td>
</tr>
<tr>
<td>Shows autonomy in the planning of activities and tasks and shows initiative in decision making.</td>
<td>LTL, AUT</td>
</tr>
<tr>
<td>Uses ICTs to help search for information and/or for presenting the results.</td>
<td>LTL, DIG</td>
</tr>
<tr>
<td>With help, carries out simple experiments or investigations, and conjectures as to the results.</td>
<td>MST, LTL, AUT</td>
</tr>
<tr>
<td>Uses strategies to help their own learning, as well as asking for help and information.</td>
<td>LTL, AUT</td>
</tr>
<tr>
<td>First approaches to cooperative learning.</td>
<td>SOC, LTL</td>
</tr>
<tr>
<td>Begins observation, using relevant instruments and consulting written documents and images.</td>
<td>LTL, AUT</td>
</tr>
<tr>
<td>Shows autonomy and proactiveness in the planning of and carrying out of actions.</td>
<td>AUT</td>
</tr>
<tr>
<td>Presents work clearly and in an organised fashion.</td>
<td>LIN, LTL, AUT</td>
</tr>
<tr>
<td>With help, carries out a project and presents a report, using paper and/or digital means, collecting information from different sources and presenting the results orally and with the support of images and short texts.</td>
<td>LIN, LTL, AUT, DIG</td>
</tr>
</tbody>
</table>
Look at the pictures. What do these things have in common? What makes them different from each other?

Look at the pictures. How do we use these things in our daily lives?

Choose one of these living or non-living things.

1. water
2. chicken
3. plants
4. sand
5. wood

Describe the living or non-living thing you have chosen. Use the words in the box to help you.

animal, plant, meat, food, material, fuel, product, abundant, scarce

How can we conserve or look after the thing you have chosen? Can we live without it?

Look for pictures and more information about the thing you have chosen. Find out why it is important for human beings.

Make a chart using the pictures and the information you have found. Don’t forget to include the characteristics and why it is important for human beings. Present your work.

Group project

Two heads are better than one!

Checklist

We included a description and its characteristics.

We explained why it is important to human beings.

We used pictures.

We used books or the internet to find more information.

Before doing these activities using different cooperative learning structures, you should form the groups. Teachers should form the groups rather than letting the pupils choose their own group members. Remember to form heterogeneous groups of three or four pupils.

Tell the pupils what they will be doing in their groups, what procedures they will follow, and what your expectations are. If during these activities any team is having difficulty, spend some time in class on the relevant team skills.

Look at the pictures. What do these things have in common? What makes them different from each other?

This is a Think–pair check activity. Focus your pupils’ attention on the eight photos at the top of page 48.

Ask your pupils to look at the photos and think independently about the questions: what do all of them have in common? How are they different?

Tell them to discuss their answers in pairs. Ensure that each pupil shares something with their partner.

Then, ask the pairs to share their answers with the rest of the class.
Look at the pictures. How do we use these things in our daily lives?

- This is a *Round robin* activity. Focus your pupils’ attention on the six photos at the bottom of page 48.
- Using the zoom on the interactive whiteboard, show the pupils the first photo. Give each group a sheet of paper and a pencil. You can use the clean side of a piece of paper from the recycling bin.
- Each pupil, in turn, writes down his or her answer as the paper and pencil are passed around the group.
- Do the same with the rest of the photos, handing out a new piece of paper for each photo.

### GROUP PROJECT

1. Choose one of these living or non-living things.
   - Focus your pupils’ attention on the four photos at the top of page 49. Check to see if pupils can identify which photos are living things and which are non-living things, before they choose one to continue the project with.

2. Describe the living or non-living thing you have chosen. Use the words in the box to help you.
   - This is a *Think–write–pair check* activity.
   - Ask your pupils to look at the words in the box. Then, tell them to describe the living or non-living thing they have chosen using these words and other words they know.
   - Ask your pupils to write their ideas.
   - Once they have finished, ask them to pair up and discuss their ideas with a partner.

3. How can we conserve or look after the thing you have chosen? Can we live without it?
   - This is a *Group members consult* activity.
   - Ask your pupils to put their pencils down in the middle of the table.
   - Tell them to read activity 3 and to discuss it. All members of the team should contribute.
   - When everyone in the group has decided on an answer, ask them to pick up their pencils and write their answers.

4. Look for pictures and more information about the thing you have chosen. Find out why it is important for human beings.
   - Pupils can look for pictures and more information in reference books, higher-level school books or on the internet.

5. Make a chart using the pictures and the information you have found. Don’t forget to include the characteristics and why it is important for human beings. Present your work.
   - This is a *Group project* activity.
   - Clearly explain the project the groups are going to do and the amount of time they have to complete it.
   - Assign roles:
     - captain (in charge of managing the group and assigning the different roles)
     - materials manager
     - spokesperson
     - timekeeper
   - After distributing the materials, ask your pupils to work to complete the task.
   - Monitor your pupils.
   - Ask the groups to share their project with the class.

### CHECKLIST

- Group assessment is essential in cooperative learning to ensure that there is analysis of interactions and promotion of teamwork. Pupils should understand that how they work together affects the quality and quantity of concepts that they learn and understand.
- Ask pupils to discuss and reflect on how the group worked together and identify ideas and actions that helped the group achieve its goals.
- Once they have shared their results, ask them to reflect on how the project could be done better next time.
- Invite your pupils to share their conclusions with the class.
Read the quiz and write the answers in your notebook.

1. Name three body systems. Explain what they do.
   - The circulatory system moves blood through the heart and around the body in the arteries and veins. The respiratory system helps us to breathe. The digestive system helps us to digest food.

2. List the five senses and sense organs.
   - Sight. Our eyes are the organs of sight. Hearing. Our ears are the organs of hearing. Smell. Our nose is the organ of smell. Taste. Our tongue is the organ of taste. Touch. Our skin is the organ of touch.

3. Which is the largest organ in the human body?
   - Skin is the largest organ in the human body.

4. How many main meals do we eat each day?
   - We eat three main meals every day: breakfast, lunch and dinner.

5. Name four things we do every day to stay healthy.
   - Wash our hands. Brush our teeth. Do lots of exercise. Enjoy our free time. Rest. Have a bath or shower.

6. List the five stages of life.
   - The five stages of life are: babies, children, adolescents, adults and elderly people.
7. **Name the five main groups of living things.**

The five main groups of living things are: animals, plants, fungi, algae and bacteria.

8. **Name three life processes of animals and plants.**

Three life processes of animals and plants are: nutrition, reproduction and interaction.

9. **Name four parts of a plant.**

The parts of a plant include the roots, the stem, the leaves and the flower.

10. **What can you see in photos A–D?**

*Photo A shows an eye, the sense organ of sight. The parts of the eye are: the pupil, the iris, the eyelashes, the eyelid and the eyebrow.*

*Photo B shows a girl washing her hands. This is a healthy habit.*

*Photo C shows some mushrooms. Mushrooms are fungi.*

*Photo D shows a butterfly. Butterflies are animals.*

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3. **Team A: We need this for strong and healthy bones.**

   **Answer:** calcium

4. **Team A: This food group gives us energy.**

   **Answer:** carbohydrates

5. **Team A: This body system moves blood around the body.**

   **Answer:** the circulatory system

6. **Team A: Plants need these things to make their own food.**

   **Answer:** sunlight, water and nutrients from the soil.

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**TEAM TEST!**

1. **Get into teams. Take it in turns to guess what the other team is talking about.**

   1. **Team A:** Speaking is an example of this life process.  
      **Answer:** interaction

   2. **Team A:** Having babies is an example of this life process.  
      **Answer:** reproduction

   2. **Team B:** Eating is an example of this life process.  
      **Answer:** nutrition

   3. **Team B:** Touching is an example of this life process.  
      **Answer:** interaction

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**Listen and check your answers.**

(CD1 track 37)

- Pupils can check their own answers or check a partner’s or another group’s answers.

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**Write two more sentences and test the other team.**

- Give pupils a limited amount of time to go through the units and make up two more sentences to test their classmates. Circulate and check accuracy and suitability.

- At the end of the test, the winning team can choose either a video link or song from the unit, or request a particular game you play in class to close the lesson.